



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mary Bendig *et al.*

Serial No.: 10/070,566

Group No.: 1638

Filed: 03/07/02

Examiner: Mehta, A.D.

Entitled: Chimaeric Plant Viruses With Mucin Peptides

CERTIFICATE RE: SEQUENCE LISTING

MS Amendment

Commissioner for Patents

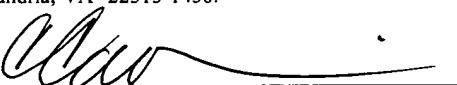
P.O. Box 1450

Alexandria, VA 22313-1450

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: November 29, 2004

By: 

Cliff Cannon-Cin

Sir or Madam:

I hereby state that the enclosed Sequence Listing is being submitted in paper copy and on a computer-readable diskette, and that the content of the paper and computer readable copies are the same.

Dated: November 29, 2004

By: 

Christine A. Lekutis

Registration No. 51,934

MEDLEN & CARROLL, LLP
101 Howard Street, Suite 350
San Francisco, California 94105
415.904.6500



SEQUENCE LISTING

<110> Bendig, Mary
Jones, Tim
Hellendoorn, Koen

<120> Chimaeric Plant Viruses with Mucin Peptides

<130> DOW-07657

<140> 10/070,566
<141> 2002-03-07

<160> 38

<170> PatentIn version 3.2

<210> 1
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 1

Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly
1 5 10 15

Val Thr Ser Ala
20

<210> 2
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 2

Pro Asp Thr Arg Pro
1 5

<210> 3
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 3

Ala Pro Asp Thr Arg
1 5

<210> 4
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 4

Asp Ala His Trp Glu Ser Trp Leu
1 5

<210> 5
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 5

Asp Leu His Trp Ala Ser Trp Val
1 5

<210> 6
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 6

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
1 5 10 15

<210> 7
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 7

Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly
1 5 10 15

Val Thr Ser Ala Pro Asp Thr
20

<210> 8		
<211> 39		
<212> DNA		
<213> Soybean mosaic virus		
 <400> 8		
atggaaggag gatcatctaa gactgctgtg aacactggg		39
 <210> 9		
<211> 13		
<212> PRT		
<213> Soybean mosaic virus		
 <400> 9		
Met Glu Gly Gly Ser Ser Lys Thr Ala Val Asn Thr Gly		
1	5	10
 <210> 10		
<211> 48		
<212> DNA		
<213> Soybean mosaic virus		
 <400> 10		
ggtgttactt ctgctcctga tactagacct gctcctggtt ctactgct		48
 <210> 11		
<211> 68		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 11		
gatccgggt tacttctgct cctgatacta gacctgctcc tggttctact gcttctaaga		60
ctgctgtt		68
 <210> 12		
<211> 68		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 12		
gatcctctgg tgttacttct gctcctgata ctagacctgc tcctggttct actgctaaga		60
ctgctgtt		68

```

<210> 13
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 13
gatcctctaa ggggttact tctgctcctg atactagacc tgctcctgg tctactgcta 60
ctgctgtt 68

<210> 14
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 14
gatcctctaa gactgggtt acttctgctc ctgatactag acctgctcct ggttctactg 60
ctgctgtt 68

<210> 15
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 15
gatcctctaa gactgctgg tttacttctg ctcctgatac tagacctgct cctggttcta 60
ctgctgtt 68

<210> 16
<211> 33
<212> PRT
<213> Lucerne transient streak virus

<400> 16
Asn Ile Tyr Ala Pro Ala Arg Leu Thr Ile Ala Ala Ala Asn Ser Ser
1 5 10 15
Ile Asn Ile Ala Ser Val Gly Thr Leu Tyr Ala Thr Tyr Glu Val Glu
20 25 30
Leu

```

<210> 17
<211> 37
<212> PRT
<213> Soybean mosaic virus

<400> 17

Asn Ile Gly Asn Ile Leu Val Pro Ala Arg Leu Val Ile Ala Met Glu
1 5 10 15

Gly Gly Ser Ser Lys Thr Ala Val Asn Thr Gly Arg Leu Tyr Ala Ser
20 25 30

Tyr Thr Ile Arg Leu
35

<210> 18
<211> 37
<212> PRT
<213> Soybean mosaic virus

<400> 18

Asn Ile Ala Thr Asp Leu Val Pro Ala Arg Leu Val Ile Ala Leu Leu
1 5 10 15

Asp Gly Ser Ser Ser Thr Ala Val Ala Ala Gly Arg Ile Tyr Ala Ser
20 25 30

Tyr Thr Ile Gln Met
35

<210> 19
<211> 51
<212> DNA
<213> Lucerne transient streak virus

<400> 19

atagccgcag ctaacagctc cataaacata gctagtgtgg gtactcttta t

51

<210> 20
<211> 17
<212> PRT
<213> Lucerne transient streak virus

<400> 20

Ile Ala Ala Ala Asn Ser Ser Ile Asn Ile Ala Ser Val Gly Thr Leu
1 5 10 15

Tyr

<210> 21		
<211> 83		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 21		
gctaacagcg gtgttacttc tgctcctgat actagacacctg ctcctggttc tactgcttcc	60	
ataaacatag ctagtgtgg tac	83	
 <210> 22		
<211> 83		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 22		
gctaacagct ccgggtttac ttctgctcct gatactagac ctgctcctgg ttctactgct	60	
ataaacatag ctagtgtgg tac	83	
 <210> 23		
<211> 83		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 23		
gctaacagct ccatagggtgt tacttctgct cctgatacta gacctgctcc tggttctact	60	
gctaacatag ctagtgtgg tac	83	
 <210> 24		
<211> 83		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 24		
gctaacagct ccataaacgg tgttacttct gctcctgata ctagacacctgc tcctggttct	60	
actgctatag ctagtgtgg tac	83	

```

<210> 25
<211> 83
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 25
gctaacagct ccataaacat aggtgttact tctgctcctg atactagacc tgctcctgg 60
tctactgctg cttagtgtgg tac 83

<210> 26
<211> 83
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 26
gctaacagct ccataaacat agctggtggtt acttctgctc ctgatactag acctgctcct 60
ggttctactg cttagtgtgg tac 83

<210> 27
<211> 324
<212> PRT
<213> Tomato bushy stunt virus

<400> 27
Lys Lys Gln Gln Met Ile Asn His Val Gly Gly Thr Gly Gly Ala Ile
1 5 10 15

Met Ala Pro Val Ala Val Thr Arg Gln Leu Val Gly Ser Lys Pro Lys
20 25 30

Phe Thr Gly Arg Thr Ser Gly Ser Val Thr Val Thr His Arg Glu Tyr
35 40 45

Leu Ser Gln Val Asn Asn Ser Thr Gly Phe Gln Val Asn Gly Gly Ile
50 55 60

Val Gly Asn Leu Leu Gln Leu Asn Pro Leu Asn Gly Thr Leu Phe Ser
65 70 75 80

Trp Leu Pro Ala Ile Ala Ser Asn Phe Asp Gln Tyr Thr Phe Asn Ser
85 90 95

Val Val Leu His Tyr Val Pro Leu Cys Ser Thr Thr Glu Val Gly Arg
100 105 110

```

Val Ala Ile Tyr Phe Asp Lys Asp Ser Glu Asp Pro Glu Pro Ala Asp
115 120 125

Arg Val Glu Leu Ala Asn Tyr Ser Val Leu Lys Glu Thr Ala Pro Trp
130 135 140

Ala Glu Ala Met Leu Arg Val Pro Thr Asp Lys Ile Lys Arg Phe Cys
145 150 155 160

Asp Asp Ser Ser Thr Ser Asp His Lys Leu Ile Asp Leu Gly Gln Leu
165 170 175

Gly Ile Ala Thr Tyr Gly Gly Ala Gly Thr Asn Ala Val Gly Asp Ile
180 185 190

Phe Ile Ser Tyr Ser Val Thr Leu Tyr Phe Pro Gln Pro Thr Asn Thr
195 200 205

Leu Leu Ser Thr Arg Arg Leu Asp Leu Ala Gly Ala Leu Val Thr Ala
210 215 220

Ser Gly Pro Gly Tyr Leu Leu Val Ser Arg Thr Ala Thr Val Leu Thr
225 230 235 240

Met Thr Phe Arg Ala Thr Gly Thr Phe Val Ile Ser Gly Thr Tyr Arg
245 250 255

Cys Leu Thr Ala Thr Thr Leu Gly Leu Ala Gly Gly Val Asn Val Asn
260 265 270

Ser Ile Thr Val Val Asp Asn Ile Gly Thr Asp Ser Ala Phe Phe Ile
275 280 285

Asn Cys Thr Val Ser Asn Leu Pro Ser Val Val Thr Phe Thr Ser Thr
290 295 300

Gly Ile Thr Ser Ala Thr Val His Cys Val Arg Ala Thr Arg Gln Asn
305 310 315 320

Asp Val Ser Leu

<210> 28
<211> 331
<212> PRT
<213> Red clover necrotic mosaic virus

<400> 28

Lys Ser Lys Gln Arg Ser Gln Pro Arg Asn Arg Thr Pro Asn Thr Ser
1 5 10 15

Val Lys Thr Val Ala Ile Pro Phe Ala Lys Thr Gln Ile Ile Lys Thr
20 25 30

Val Asn Pro Pro Pro Lys Pro Ala Arg Gly Ile Leu His Thr Gln Leu
35 40 45

Val Met Ser Val Val Gly Ser Val Gln Met Arg Thr Asn Asn Gly Lys
50 55 60

Ser Asn Gln Arg Phe Arg Leu Asn Pro Ser Asn Pro Ala Leu Phe Pro
65 70 75 80

Thr Leu Ala Tyr Glu Ala Ala Asn Tyr Asp Met Tyr Arg Leu Lys Lys
85 90 95

Leu Thr Leu Arg Tyr Val Pro Leu Val Thr Val Gln Asn Ser Gly Arg
100 105 110

Val Ala Met Ile Trp Asp Pro Asp Ser Gln Asp Ser Ala Pro Gln Ser
115 120 125

Arg Gln Glu Ile Ser Ala Tyr Ser Arg Ser Val Ser Thr Ala Val Tyr
130 135 140

Glu Lys Cys Ser Leu Thr Ile Pro Ala Asp Asn Gln Trp Arg Phe Val
145 150 155 160

Ala Asp Asn Thr Thr Val Asp Arg Lys Leu Val Asp Phe Gly Gln Leu
165 170 175

Leu Phe Val Thr His Ser Gly Ser Asp Gly Ile Glu Thr Gly Asp Ile
180 185 190

Phe Leu Asp Cys Glu Val Glu Phe Lys Gly Pro Gln Pro Thr Ala Ser
195 200 205

Ile Val Gln Lys Thr Val Ile Asp Leu Gly Gly Thr Leu Thr Ser Phe
210 215 220

Glu Gly Pro Ser Tyr Leu Met Pro Pro Asp Ala Phe Ile Thr Ser Ser
225 230 235 240

Ser Phe Gly Leu Phe Val Asp Val Ala Gly Thr Tyr Leu Leu Thr Leu
245 250 255

Val Val Thr Cys Ser Thr Thr Gly Ser Val Thr Val Gly Gly Asn Ser
260 265 270

Thr Leu Val Gly Asp Gly Arg Ala Ala Tyr Gly Ser Ser Asn Tyr Ile
275 280 285

Ala Ser Ile Val Phe Thr Ser Ser Gly Val Leu Ser Thr Thr Pro Ser
290 295 300

Val Gln Phe Ser Gly Ser Ser Gly Val Ser Arg Val Gln Met Asn Ile
305 310 315 320

Cys Arg Cys Lys Gln Gly Asn Thr Phe Ile Leu
325 330

<210> 29
<211> 41
<212> PRT
<213> Red clover necrotic mosaic virus

<400> 29

Ala Ser Ile Val Gln Lys Thr Val Ile Asp Leu Gly Gly Thr Leu Thr
1 5 10 15

Ser Phe Glu Gly Pro Ser Tyr Leu Met Pro Pro Asp Ala Phe Ile Thr
20 25 30

Ser Ser Ser Phe Gly Leu Phe Val Asp
35 40

<210> 30
<211> 27
<212> PRT
<213> Red clover necrotic mosaic virus

<400> 30

Ala Ser Ile Val Gln Lys Tyr Val Ile Asp Leu Gly Gly Thr Leu Thr
1 5 10 15

Ser Phe Glu Gly Pro Ser Tyr Leu Met Pro Pro
20 25

```

<210> 31
<211> 51
<212> DNA
<213> Red clover necrotic mosaic virus

<400> 31
agcatcgtag aaaaaactgt aattgatctc ggtggacac tcacttcttt c      51

<210> 32
<211> 17
<212> PRT
<213> Red clover necrotic mosaic virus

<400> 32
Ser Ile Val Gln Lys Thr Val Ile Asp Leu Gly Gly Thr Leu Thr Ser
1           5           10          15

Phe

<210> 33
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 33
gaaaaactgta ggtgttactt ctgctcctga tactagacct gctcctggtt ctactgctat      60
tgatctcggt gggacgtt                                         78

<210> 34
<211> 78
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 34
gaaaaactgta attgggttta cttctgctcc tgatactaga cctgctcctg gttctactgc      60
tgatctcggt gggacgtt                                         78

```

<210> 35		
<211> 78		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 35		
gaaaaactgta attgatggtg ttacttctgc tcctgatact agacctgctc ctggttctac	60	
tgctctcggt gggacggt		78
 <210> 36		
<211> 78		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 36		
gaaaaactgta attgatctcg gtgttacttc tgctcctgat actagacctg ctcctggttc	60	
tactgctggt gggacggt		78
 <210> 37		
<211> 78		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 37		
gaaaaactgta attgatctcg gtggtggtac ttctgctcct gatactagac ctgctcctgg	60	
ttctactgct gggacggt		78
 <210> 38		
<211> 78		
<212> DNA		
<213> Artificial Sequence		
 <220>		
<223> Synthetic		
 <400> 38		
gaaaaactgta attgatctcg gtgggggtgt tacttctgct cctgatacta gacctgctcc	60	
tggttctact gctacggt		78